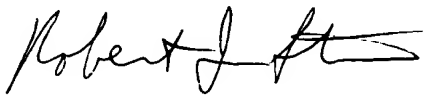
REMARKS

The claims are amended to remove the unnecessary recitations of a plasma source and a pump. These components can be external to the plasma chamber.

The term "channel" is added to claims 8 and 13 merely to avoid confusion between the apertures of the channel and the gas inlet and exhaust apertures of the chamber.

A marked up copy of the amended claims appears on the following pages of this amendment.

Respectfully submitted,



Robert J. Stern
Attorney for Applicant
Registration no. 29,703
Tel. (650) 365-4880

1. (amended) A plasma chamber comprising:

a vacuum chamber enclosure enclosing a chamber interior;

a gas inlet aperture [for admitting a] through which gas can be admitted into the chamber interior;

[a plasma excitation power source for coupling energy to the gas so as to excite at least a portion of the gas to produce a plasma within the chamber interior;]

an exhaust [pump] aperture through which gas can be exhausted from the chamber interior;

an exhaust channel extending between the chamber interior and the exhaust pump so as to provide a path for gas flow from the chamber interior to the exhaust [pump] aperture;

a deflector positioned within the exhaust channel so as to create turbulence in said gas flow through the exhaust channel; and

a magnet system having north and south magnetic poles positioned adjacent the deflector.

2. (amended) A plasma chamber according to claim 1, wherein the magnet system produces a magnetic field strong enough to block [said] plasma from extending from the chamber interior to the exhaust [pump] aperture.

7. (amended) A plasma chamber comprising:

a vacuum chamber enclosure enclosing a chamber interior;

a gas inlet aperture [for admitting a] through which gas can be admitted into the chamber interior;

[a plasma excitation power source for coupling energy to the gas so as to excite at least a portion of the gas to produce a plasma within the chamber interior;]

an exhaust [pump] aperture through which gas can be exhausted from the chamber interior;

an exhaust channel extending between the chamber interior and the exhaust [pump] aperture so as to provide a path for gas flow from the chamber interior to the exhaust [pump] aperture;

a deflector positioned within the exhaust channel so as to transversely deflect a substantial portion of said gas flow through the exhaust channel; and

a magnet system having north and south magnetic poles positioned adjacent the deflector.

8. (amended) A plasma chamber according to claim 7, wherein:

the exhaust channel comprises

[an] a channel inlet aperture in fluid communication with the chamber interior,

[an] a channel outlet aperture in fluid communication with the [pump] exhaust aperture, and

at least a first wall that extends between the channel inlet aperture and the channel outlet aperture;

the deflector comprises a protrusion extending from the first wall of the exhaust channel into the exhaust channel so as to reduce the transverse width of the exhaust channel adjacent the protrusion; and

the north and south poles of the magnet system are positioned within the protrusion.

9. (amended) A plasma chamber according to claim 8, wherein:

[the pump produces a flow of gas from the chamber interior, through a gas flow path within the exhaust channel, and to the pump; and]

the north and south magnetic poles are spaced apart along said gas flow path of the exhaust channel.

10. (amended) A plasma chamber according to claim 8, wherein the magnet system produces a magnetic field strong enough to block [said] plasma from extending from the chamber interior through the exhaust channel beyond the protrusion.

13. (amended) A plasma chamber, comprising:

a vacuum chamber enclosure enclosing a chamber interior;

a gas inlet aperture [for admitting a] through which gas can be admitted into the chamber interior;

[a plasma excitation power source for coupling energy to the gas so as to excite at least a portion of the gas to produce a plasma within the chamber interior;]

an exhaust [pump] aperture through which gas can be exhausted from the chamber interior;

an exhaust channel including

[an] a channel inlet aperture in fluid communication with the chamber interior,

[an] a channel outlet aperture in fluid communication with the [pump] exhaust aperture,

and

at least a first wall that extends between the channel inlet aperture and the channel outlet aperture; and

a magnet system having north and south magnetic poles positioned adjacent the first wall;

wherein the plasma chamber does not include any other magnet adjacent said magnet system.

14. (amended) A plasma chamber according to claim 13, wherein:

[the pump produces a flow of gas from the chamber interior, through a gas flow path within the exhaust channel, and to the pump; and]

the north and south magnetic poles are spaced apart along said gas flow path of the exhaust.

15. (amended) A plasma chamber according to claim 13, wherein:

the north and south magnetic poles are adjacent a first area of the first wall; and

the magnet system produces a magnetic field strong enough to block [said] plasma from extending from the chamber interior through the exhaust channel beyond said first area.

26. (amended) A method of preventing [the] plasma within a plasma chamber from extending completely through the exhaust channel of the chamber [to the exhaust pump], comprising the steps of:

providing a vacuum chamber enclosure that encloses a chamber interior;

admitting a gas into the chamber interior;

[coupling energy to the gas so as to excite at least a portion of the gas to produce a plasma within the chamber interior;]

providing an exhaust channel extending between the chamber interior and an exhaust [pump] aperture so as to provide a path for gas flow from the chamber interior to the exhaust [pump] aperture;

positioning a deflector within the exhaust channel so as to create turbulence in said gas flow through the exhaust channel; and

creating a magnet field within the exhaust channel having a substantial component that is transverse to said gas flow path.

27. (amended) A method according to claim 26, wherein the creating step comprises:

creating said magnetic field with sufficient strength to block [said] plasma from extending from the chamber interior to the exhaust [pump] aperture.